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| 10/634,910 | 08/06/2003 | Woon-Song Baik | K-0528 | 7365 |

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| EXAMINER |
|---|
| LEVITAN, DMITRY |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/634,910 | BAIK, WOON-SONG |
| | Examiner | Art Unit | |
| | Dmitry Levitan | 2616 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>06 August 2007</u>.

2a)☒ This action is **FINAL**.      2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-3 and 5-22</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-3 and 5-22</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>06 August 2007</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☒ All    b)☐ Some * c)☐ None of:

         1.☒ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Amendment, filed 8/06/07, has been entered. Claims 1-3 and 5-22 remain pending.

### Drawings

1.      The drawings were received on 8/06/07.  These drawings are not acceptable.

2.      The drawings are objected to because of typographical errors on Fig. 2 "serd" twice and Fig. 4 "exitsts" and "runction".

3.      Path 'b' shown on Fig. 7 is unclear, as it does not properly show the connection between 30 and 710, as the elements of the path are not identified.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

## *Specification*

1.    The disclosure is objected to because of the following informalities:

Unclear text on page 23, [0071], which is directed to the connection between  agent 710 and the

subscriber. The connections of agent 710 to other elements of the system are unclear. It is

unclear if Path '1' of Fig. 7 is a direct connection between 720 and 710 or these elements are

connected through Internet 20.

Appropriate correction is required.

## *Claim Objections*

2.    Claim 11 is objected to because of the following informalities:  abbreviation IPSec

should be fully disclosed in the claim.  Appropriate correction is required.

## *Claim Rejections - 35 USC § 112*

3.    Claims 1-3 and 5-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement.  The claim(s) contains subject matter which

was not described in the specification in such a way as to reasonably convey to one skilled in the

relevant art that the inventor(s), at the time the application was filed, had possession of the

claimed invention.

Claims 1 and 19 proposed limitations are directed to "a plurality of combinations of

packet-pattern attributes, <u>each combination assigned a different security classification</u>".

The related portion of the specification, Table 2 and [0048]-[0051], teaches using IPSec security parameter but does not teach using <u>each combination assigned different security classification</u>.

4.      Claim 20 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not provide sufficient details to enable a skilled in the art to make and use the invention because it does not adequately describe the following:

Regarding claim 20, the operation of Internet host, connected between the agent and the Internet for enabling Internet subscriber and mobile terminals connections to the agent.

The specification does not provide enough details about the structure and operation of the elements associated with the above identified claimed features to enable one skilled in the art to make and use the invention without undue experimentation.

5.      Claims 1-3 and 5-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 19 limitations directed to "different security classification" is unclear, because it is not understood what "different" means in the context of the claims: each packet call filtering information comprises different security classification for each packet filtering information, or each packet call filtering information comprises different security classifications.

Claims 1 and 19 limitations directed to "different arrangements of said attributes" is unclear, because it is not understood what "different" means in the context of the claims: each packet call filtering information comprises different arrangements of said attributes for each packet filtering information, or each packet call filtering information comprises different arrangements of said attributes.

Claim 8 limitations, directed to "a protocol number (Ipv4) and a next header (Ipv6)" are unclear, because it is not understood what "next" means in the context of the claim: next packet's header or the next field of the same packet.

Claim 14 limitations, directed to "static information" are unclear, as it is not understood what information is considered static and what is not.

Claims 16, 18-20 limitations, directed to "inquiring and/or updating" and "inquiry and/or update message" are unclear, because it is not understood what is claimed: inquiring and updating or inquiring or updating.
Claims, comprising multiple "and/or", are confusing, as it is not understood if one or two actions or one or two messages are claimed.

Claims 21 and 22 limitations, directed to "different numbers of the same packet-pattern attributes or different arrangements of different packet-pattern attributes" are unclear as written.


Other claims are rejected as the claims depending on the claims rejected above.

## *Claim Rejections - 35 USC § 103*

6.      Claims 1-3, 5-22 (as best understood) are rejected under 35 U.S.C. 103(a) as being

unpatentable over Uskela (US 6,980,512).

7.      Regarding claims 1, 19, 21 and 22, Uskela teaches a method for controlling a packet call

in a mobile communication system (mobile system, shown on Fig. 1 and 4:44-5:30, wherein

GGSN 7 performs screening/filtering for packets directed to the mobile user 1), comprising:

registering filtering information for a packet call for at least one subscriber, the packet

call filtering information including packet pattern attributes, including security attributes

(creating a screening list for subscribers to screen/filter the calls received from external terminals

5 according to connection point identifiers, CEI, including cipherkey of IPSEC protocol, as

shown on Fig. 2 and 5:51-6:25);

if a packet addressed to the subscriber as a destination is received, determining whether

to set the call connection for the received packet of a call based on a comparison of attribute

information of the received packet and the registered call filtering information (determining on

establishing a connection for the received call or deny it, based on the comparison of CEI of the

received packet with CEI of the screening list, as shown on Fig. 2 and 5:52-6:24), and

setting the call according to the determination step above (performing CEI check and

packet termination according to steps S103-S106 on Fig. 2).

Uskela does not teach using filtering information comprising a combination of attributes,

including different security and different arrangements.

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to add using filtering information comprising a combination of attributes, including

different security and different arrangements to the system of Uskela to improve the system

security and authentication to protect the system against attacks 6:15-25.

In addition, regarding claim 19, Uskela teaches an apparatus for controlling a packet

terminating call in a mobile communication system (GGSN 7, as shown on Fig. 1 and 4:44-5:5),

comprising:

a database which stores routing information and filtering information of a protocol data

unit for a packet radio service (memory of GGSN to store the screening list 5:14-31, which

comprises routing and filtering information as shown in example 7:37-54);

a terminating call control section which controls a terminating call setting for the protocol

data unit based on the routing information and the filtering information (portion of GGSN to

perform call termination according to the process, shown on Fig. 3 and 6:61-7:54);

a message processing section which performs an inquiry and/or update of the filtering

information based on an inquiry message and/or update message of the filtering information

(portion of GGSN performing inquiry for records at step S205, shown on Fig. 3 and 7:2-10); and

an Internet protocol processing section which processes the protocol data unit and

performs the terminating call setting procedure under control of the terminating call control

section (portion of GGSN performing communication with Internet, as disclosed on 7:16-54).

8.      Regarding claim 2, Uskela teaches call screening list to comprise information on

activating the screen list, as establishing detection points for received/transmitted packets, as

internetworking process between the GGSN and IP, wherein the detection point activate/start

interrogation process for a subnetwork, comprising several addresses 6:61-7:36, as shown in example 7:37-53.

9.       Regarding claim 3, Uskela teaches call screening list to comprise information on activating the screen list filtering, including denial and permission, as the list comprise tags identifying whether to allow or deny the reception of certain packets 2:46-50.

10.      Regarding claims 5 and 6, Uskela teaches call screening list to comprise the received packets CEI, including IP addresses, port numbers and other information identifying the packet source, as the CEI of a packet is inherently located in the header of the packet, wherein the CEI packet information is inherently indicated by a known pattern, 5:66-6:25.

11.      Regarding claim 14, Uskela teaches GGSN node comprising the packet screening list, according to static information 5:1-37 and 5:51-55.

12.      Regarding claim 15, Uskela teaches receiving a packet from a mobile user, identifying the packet CEI and using the CEI of the packet to register the packet screening list information based on the received packet, as shown on Fig. 3 and 6:61-7:54.

13.      Regarding claims 16 and 18, Uskela teaches performing screening for uplink packets in the mobile terminal to avoid air time charges 5:14-24 and propagating the screening list across the network. Therefore, the screening list, created in dynamic process of Fig. 3 and 6:1-7:54, as a result of inquiry of the mobile unit and subsequent update/creation of the screening list, is transferred to the mobile unit.

          In addition, regarding claim 18, Uskela teaches strong authentication for the system due to the charging involved 6:21-24, therefore authenticating the mobile subscriber in the system.

14.     Regarding claim 7, Uskela substantially teaches the limitations of the claim (see the

parent claims rejection above).

In addition, Uskela teaches using the source address information for SEI 6:14-24, including use

of subnetwork comprising a plurality of IP addresses 7:30-35, identified by masks as shown in

example 36-54 for the packets transmitted from the mobile unit.

Uskela does not teach using subnet mask for the packets directed to the mobile unit.

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to add using subnet mask for the packets directed to the mobile unit to the system of

Uskela to improve the system operation in the other direction of the communication by excluding

packets from particular addresses.

15.     Regarding claims 9 and 10, Uskela substantially teaches the limitations of the claim (see

the parent claims rejection above).

In addition, Uskela teaches identifying the packet destination and source ports for the screening

list 6:14-18 and using a range of addresses for the screening list profile 7:37-54.

Uskela does not teach using ranges to indicate destination and source ports in the

screening list.

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to add using ranges to indicate destination and source ports in the screening list to the

system of Uskela to save memory in the system and simplify the system operation with the

screening list.

16.     Regarding claims 11, Uskela substantially teaches the limitations of the claim (see the

parent claims rejection above).

In addition, Uskela teaches using IPSEC procedure for authentication 6:17-24.

Uskela does not teach using security parameter index of IPSEC for authentication.

It would have been obvious to one of ordinary skill in the art at the time the invention was made

to add using security parameter index SPI of IPSEC in the screening list to the system of Uskela

to improve the system security.

17.     Regarding claim 17, Uskela substantially teaches the limitations of the claim (see the

parent claims and claim 15 rejection above).

In addition, Uskela teaches authenticating Internet subscriber 6:18-24.

Uskela does not teach using dynamic registration procedure of Fig. 3 and 6:61-7:54 for the

packets directed to the mobile unit.

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to add using dynamic registration procedure for the packets directed to the mobile unit

to the system of Uskela to improve the system operation in the other direction of the

communication by excluding packets from particular addresses.

18.     Regarding claim 20, Uskela substantially teaches the limitations of the claim (see the

parent claims rejection above).

In addition, Uskela teaches using updating the screen list by information from external server

and propagated through network, as disclosed on 2:37-54.

Uskela does not teach using an Internet host implementing an agent for receiving updates

and responding to them.

Official notice is taken that using an Internet host implementing an agent to implement a

process is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement screen updates of Uskela in a server comprising an agent in the system of Uskela to improve the system operation with an external server inquiries by utilizing well known method of using a software agent.

19.     Claims 8, 12 and 13 are rejected (as best understood) under 35 U.S.C. 103(a) as being unpatentable over Uskela in view of Puuskari (US Pub. 2002/0032800).

Uskela substantially teaches the limitations of the claims (see parent claims rejections above).

Uskela does not teach using particulars of IPv4 and Ipv6 protocols.

Puuskari teaches using a wireless system, comprising GGSN implementing filter for packets, based on the Type of service (IPv4), connection type (IPv6) and traffic class field (IPv6), as disclosed in [0007] and [0008], wherein IPV6 datagram header comprises "next header" field.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add using IPv4 and Ipv6 protocols particulars, as Type of service (IPv4), connection type (IPv6), IPV6 "next header" field and traffic class field (IPv6) of Puuskari to the system of Uskela to improve the system filtering operation by better identification of the filtered packets.

### Response to Arguments

20.     Applicant's arguments filed 8/06/07 have been fully considered but they are not persuasive.

On page 11 of the Response, Applicant argues that Fig. 7 clearly identifies connection between

elements 30 and 710.

Examiner respectfully disagrees.

Mobile terminal 30 can contact a server comprising agent 710 only through base station 150,

base station controller 140 and other appropriate elements of a communication system, shown on

Fig. 7, as these elements are essential for establishing connection 'b'.

Therefore, connection 'b' of Fig. 7 does not identify the connection path between mobile

terminal 30 and agent 710.


On page 13 of the Response, Applicant argues that that claim 8 and 12 limitations "and/or" are

clear.

Examiner respectfully disagrees.

Multiple use of "and/or" in claim 16 is confusing, as it is unclear if the limitations "and/or" are

consistently interpreted as "and" or "or" in all steps of the claim, as three steps of the claims

comprising limitations "and/or" can have different interpretation of "and/or" in each step,

resulting in multiple variations of the claim.

Therefore, claims 16, 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.


On page 14 of the Response, Applicant argues that claim 14 limitation "static information" is

clear, because of the mentioning of static information in disclosure [0042].

Examiner respectfully disagrees.

"Static information" is a general term and is not limited to the cited portion of the disclosure, as indicated by Applicant. Claim 14 limitations comprise no information on what information is considered static and what is not. Claim 14 is rejected as being indefinite.


On page 15 of the Response, Applicant argues that that Uskela CEI, used for packet screening, is limited to port number and internet address.

Examiner respectfully disagrees.

Uskela clearly teaches using any information which identifies the packet source and destination for CEI screening list, including IPSEC cipherkey 6:5-25 to protect system against attacks. Uskela also teaches allowing or denying call connection, based on the comparison of the packet header attributes with the attributes of the screening list 5:51-6:4.


Applicant's arguments with respect to claims 1-3 and 5-22 have been considered but are moot in view of the new ground(s) of rejection, necessitated by the amendment.


## *Conclusion*

21.　　Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

　　A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The

examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Lynn Feild can be reached on (571) 272-2092. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dmitry Levitan
Primary Examiner
Art Unit 2616